



1646
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PIPER RUDNICK LLP
1200 NINETEENTH STREET, NW
WASHINGTON, DC 20036-2412
TELEPHONE: 202-861-3900
FACSIMILE: 202-223-2085

DOCKET NO.: 9528-002-27

ASSISTANT COMMISSIONER FOR PATENTS
WASHINGTON, D.C. 20231

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JAN 02 2003

TECH CENTER 1600/2900

Re: Serial No.: 09/519,728
Applicant(s): Bruce D. WEINTRAUB, et al.
Filing Date: March 3, 2000
For: MUTANTS OF THYROID STIMULATING HORMONE AND
METHODS BASED THEREON
Group Art Unit: 1646
Examiner: Eliane M. Lazar Wesley

SIR:

Attached hereto for filing are the following papers:

FEE TRANSMITTAL
REQUEST FOR EXTENSION OF TIME (1 month)
AMENDMENT

Our check in the amount of \$ 110.00 is attached covering any required fees. In the event any variance exists between the amount enclosed and the Patent Office charges for filing the above-noted documents, including any fees required under 37 C.F.R. 1.136 for any necessary extension of time to make the filing of the attached documents timely, please charge or credit the difference to Deposit Account No. 50-1442. Further, if these papers are not considered timely filed, then a request is hereby made under 37 C.F.R. 1.136 for the necessary extension of time. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

PIPER RUDNICK LLP

CHRIS RAIMUND
REG. NO. 47,258

FOR Steven B. Kelber
Attorney of Record
Registration No.: 30,073

Patrick R. Delaney
Registration No.: 45,338



FEE TRANSMITTAL

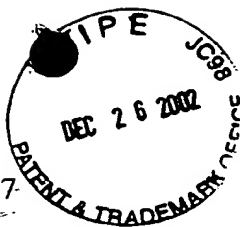
FEE TRANSMITTAL		Docket No.	9528-002-27	
		Serial No.	09/519,728	
		Filing Date	March 2, 2000	
		Inventor(s)	Bruce D. WEINTRAUB, et al.	
		Group Art Unit	1646	
TOTAL AMOUNT OF PAYMENT		\$110.00	Examiner	Eliane M. Lazar Wesley

1. <input type="checkbox"/> Applicant claims small entity status.										FEE CALCULATION (continued)													
<input checked="" type="checkbox"/> Charge any <u>UNDERPAYMENT</u> or credit any <u>OVERPAYMENT</u> in the indicated fees to Deposit Account No. 50-1442.										3. ADDITIONAL FEES													
<input type="checkbox"/> Charge the indicated fees to Deposit Account No. 50-1442.																							
2. <input checked="" type="checkbox"/> Check enclosed.																							
FEE CALCULATION																							
1. BASIC FILING FEE																							
Large Entity		Small Entity		Fee Description				Fee Code		Fee (\$)		Fee Description		Fee Paid									
1001		740		2001		370		Utility filing fee				1251		110									
1002		330		2002		165		Design filing fee				1252		400									
1003		510		2003		255		Plant filing fee				1253		920									
1004		740		2004		370		Reissue filing fee				1254		1440									
1005		160		2005		80		Provisional filing fee				1255		1960									
SUBTOTAL (1)										\$0.00		1401		320		2401		160					
2. EXTRA CLAIM FEES										1402		320		2402		160		Appeal Brief					
tot. claims		15		-		20*		= 0		x \$18		= 0		1403		280		2403		140		Request for Oral Hearing	
ind. claims		3		-		3*		= 0		x \$84		= 0		1501		1280		2501		640		Utility/Reissue Issue Fee	
<input type="checkbox"/> Multiple Dependent Claims										\$280		=		1502		460		2502		230		Design Issue Fee	
Large Entity		Small Entity		Fee Description				Fee Code		Fee (\$)		Fee Code		Fee (\$)		Fee Description		Fee Code		Fee (\$)		Fee Description	
1202		18		2202		9		Claims in excess of 20				1806		180		1806		180		IDS Submission			
1201		84		2201		42		Independent claims in excess of 3				8021		40		8021		40		Assignment			
1203		280		2203		140		Multiple dependent claim, if not paid				1801		740		2801		370		For Filing RCE			
1204		84		2204		42		*Reissue independent claims over original patent				1802		900		1802		900		Expedited Design			
1205		18		2205		9		*Reissue claims in excess of 20 and over original patent				OTHER (indicate below):											
SUBTOTAL (2)										\$0.00													
* or number previously paid, if greater; For Reissues, see above										SUBTOTAL (3)										\$110.00			

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Name	Steven B. Kelber	Registration No.	30,073
Signature		Date	12/26/02
Name	FOR Patrick R. Delaney	Registration No.	45,338

DOCKET NO. 9528-002-27



#14/B
DMT
1-28-03

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: Bruce D. WEINTRAUB et al. ART UNIT: 1646
SERIAL NO.: 09/519,728 EXAMINER: E.M. Lazar Wesley
FILING DATE: March 3, 2000
FOR: MUTANTS OF THYROID STIMULATING HORMONE AND METHODS
BASED THEREON

AMENDMENT

ASSISTANT COMMISSIONER FOR PATENTS
WASHINGTON, D.C. 20231

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SIR:

Responsive to the outstanding Office Action dated August 26, 2002, entry of the
following is respectfully requested:

IN THE CLAIMS

Please add the following new claims:

-- 69. (New) A mutant TSH heterodimer comprising (a) a TSH β subunit joined via a peptide bond at its carboxyl terminus to the amino terminus of the carboxyl terminal extension peptide of human chorionic gonadotropin; and (b) an α subunit, wherein at least the TSH β subunit or the TSH α subunit contains at least one amino acid substitution;

B1 wherein the bioactivity of the mutant TSH heterodimer is greater than the bioactivity of wild type TSH heterodimer; and wherein the at least one amino acid substitution is in amino acid residues selected from among positions 58-68 of the amino acid sequence of TSH β subunit as depicted in Figure 2 (SEQ ID NO:2).